

State of Louisiana
Department of Transportation and Development (DOTD)
Materials and Testing Section Qualification Procedure
for
Qualified Products List 37

THREE COAT ORGANIC ZINC PAINT SYSTEM

MATERIAL SPECIFICATION REFERENCE:

DOTD Standard Specifications, Subsections 811.03(a) and 1008.02 (copy attached)
DOTD Standard Specifications, Subsections 811.03(a) and 1008.02 Metric (copy attached)
DOTD Special Provisions, Subsection 1008.02 11/96 (copy attached)

This reference covers the paint system consisting of two coats of epoxy polyamide organic zinc primer and one coat of vinyl aluminum topcoat to be used as specified for painting all required metal surfaces.

PRELIMINARY REQUIREMENTS:

Qualified Product Evaluation Form

Submit a standard "Qualified Product Evaluation Form" to the DOTD Materials and Testing Section Coordinator listed below, along with a letter requesting evaluation for the Qualified Products List. (copy of form attached)

Product Data Sheets

Include product data sheets to provide all pertinent information relative to the product to be evaluated, including, but not limited to, manufacturer's specifications, mixing instructions, if required, recommended application procedure and rate typical analysis and Materials Safety Data Sheet (MSDS). Give mixing ratio by weight and by volume.

Sample (to be furnished at no cost to the Department)

All containers shall be labeled showing the manufacturers, brand name, lot number or batch number, date of manufacture, mixing ratio by weight and volume of each component.

1. Primers - Supply enough material of each component to make a minimum of 4 liters(1 gallon) of red and 4 liters(1 gallon) green primer.
2. Wash Primer - Supply enough material of each component to make a minimum of 4 liters(1 gallon).
3. Topcoat - Supply 4 liters(1 gallon).

4. Thinners - Supply 8 liters (2 gallons) of recommended thinner for evaluation, thinning and washing for topcoat and primer.

TEST REQUIREMENTS:

Laboratory Testing

All tests to be performed in accordance with the Chemical Procedures Manual. All referee testing to be tested in accordance with the following methods.

Density	ASTM D1475
Viscosity	ASTM D562
Dry to Touch	ASTM D1640
Dry Through	ASTM D1640
Pigment percent	ASTM D2698
Vehicle percent	ASTM D2698
Solids percent	ASTM D2369
Volatile percent	ASTM D2369
Non-Volatile in Vehicle	ASTM D2369 & 2698
IR-Spectra	ASTM D2621
Amine Value	Procedure attached
Epoxy Equivalent	Procedure attached
Solvent Blend	ASTM D3271
Gel Test (Krebs increase)	ASTM D562
Sag Test	Leneta Anti-Sag Meter
Grind	ASTM 1210

Accelerated Weathering Test

(a) Five test panels made from A-36 steel shall be sandblasted to an SSPC-SP10 near white blast and coated with the red and green tinted primers and then exposed for 2 weeks in the salt fog apparatus, removed, washed thoroughly with water to remove soluble salts and dried. Vinyl wash primer and aluminum topcoat will be applied, two panels will undergo "QUV" testing and three panels will undergo salt fog testing as in (b) and (c).

(b) Three test panels approximately 100 by 200 by 3.3 mm (4 by 8 by 0.13 in.), made from A-36 steel shall be sandblasted to an SSPC-SP10 near white blast and coated with the red and green tinted primers and aluminum topcoat in accordance with the specifications. The panels shall then be scribed. The panels shall show no blistering, cracking, flaking, peeling or undercutting after 1500 hours exposure in a salt fog apparatus in accordance with ASTM B-117.

(c) Two steel test panels approximately 75 by 125 by .5mm (3 by 5 by 0.02 in.), coated with the red and green tinted primers and aluminum topcoat in accordance with the specifications and scribed shall be unaffected except for slight chalking or discoloration after 1500 hours in an ultraviolet light-water exposure apparatus (QUV) in accordance with ASTM G 53.

(d) Application on the steel panels shall be done with the panels in a near vertical position. The paint shall show no surface imperfection due to pinholes, cratering, bubbles, fisheyes, and shall show no sagging to meet dry film thicknesses.

Total Evaluation Time

Laboratory testing - 1 month

Accelerated weathering testing - 5 months

GENERAL:

Upon completion of the evaluation, the submitter will be notified in writing concerning the results of the evaluation and whether the product will or will not be added to the Qualified Products List. The Department reserves the right to reevaluate any product at any time.

PROJECT ACCEPTANCE REQUIREMENTS:

Qualification of a product is not blanket approval for its use. Final acceptance of each lot or shipment is dependent upon test results which shall conform to the established specification requirements and which identify the sample as being representative of the product originally approved.

DISQUALIFICATION:

Any product may be removed from the Qualified Products List should the product fail to comply with specifications or performance requirements. The Department must be notified in writing of any change in product formulation. Significant changes may require reevaluation of the product.

REQUALIFICATION:

Any product which has been disqualified and removed from the Qualified Products List will be considered for reevaluation only after submission of a formal request along with acceptable evidence that the problems causing the disqualification have been resolved.

DOTD MATERIALS AND TESTING SECTION COORDINATOR:

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Approved 11-01-99
GARY DOYLE, P. E.
DOTD MATERIALS ENGINEER ADMINISTRATOR